



Urban Tree Experts

BS5837 – Tree Surveys – Ecological Consulting

BS 5837:2012 TREE SURVEY AND ARBORICULTURAL METHOD STATEMENT FOR MARSDEN



**Prepared on instructions from:
Mr & Mrs J Cunningham
Marsden
Blagrove Lane
Caversham
Reading RG4 7DZ**

Ref: SPH/SN/5837-01/10.08v2

10th August 2017



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Summary

We inspected all of the trees that could be affected by the proposed development at Marsden, Blagrove Lane, Caversham, Berkshire, RG4 7DZ, using information supplied by Day Tanner Ltd and Ordnance Survey. The tree details are contained in a schedule included at Appendix 1.

6 individual trees were assessed in accordance with the cascade chart for tree quality (Table 1: Section 4) of British Standard (BS) 5837:2012. They are categorised as follows.

- Three trees are in Category 'B' "Trees of moderate quality"
- Three trees are in Category 'C' "Trees of low quality"

Mitigation is required to demonstrate how the retained tree root protection areas (RPAs) will be protected during any development, including access to the proposed development area. The RPAs are shown on the drawing included at Appendix 3.

1. Introduction

1.1 Instructions

- 1.1.1 We are instructed by Mr & Mrs J Cunningham to survey the trees and prepare a tree survey and arboricultural method statement for the proposed development at Marsden.
- 1.1.2 The trees were surveyed in accordance with 'BS 5837:2012' a guide for 'Trees In Relation To Design, Demolition and Construction - Recommendations' (Section 4).

1.2 Validation

- 1.2.1 In accordance with the *Department for Communities and Local Government (DCLG) Circular 03/2010* document *Guidance on Information Requirements and Validation*, this report fulfils the recommended national listed criteria for tree survey information. This report should be read in conjunction with the following documents and drawings:
 - A tree survey, undertaken by a qualified arboriculturist, and tree schedule, included at Appendix 1.
 - A drawing at 1:200 scale with a north point, indicating the tree locations and colour coded, ref SPH/EP/5837-01/10.08 included as Appendix 2.
 - The root protection area and tree protection barrier drawing, ref SPH/EP/RPA-01/10.08 included at Appendix 3.
 - A shade constraints drawing, ref SPH/EP/SH-01/10.08 included at Appendix 4.
 - A mitigation drawing, ref SPH/EP/MIT-01/10.08 included at Appendix 5.
 - Default tree protection from BS 5837:2012 – Appendix 6.
 - Ground protection measures – Appendix 8.



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2. Scope of this report

- 2.1 The purpose of this report is to quantify the trees most likely to be impacted upon by the development proposal, and to highlight how potential damage to them may be avoided.
- 2.2 This tree survey provides the basic data on the trees implicated in a forthcoming planning application. It does not set out to put arguments for or against the development. It does set out how to decide upon the retention of the trees, means of protecting the retained trees during development and on means of incorporating the trees into the developed landscape, along with appropriate management and protective measures.
- 2.3 The primary purpose of this report is for the client and council to review the information provided and use it for the purpose of considering a planning application or engaging in further discussions towards the same end. The information is provided on the basis that it will be available to people other than arboriculturists i.e. those without specialist knowledge of the subject.

3. Site visit and the collection of data

3.1 Site visit

- 3.1.1 The trees were surveyed by Mr Ed Power OND of Urban Tree Experts on 10th August 2017. The trees were inspected from ground level and without any form of detailed investigations; binoculars were used to aid the inspection process. The measurements we undertook on site were made with the aid of a rounded down diameter tape and TruPulse™ laser hypsometer. The trees were not tagged as they are easily identified on site and with reference to the attached tree location plan. The weather at the time of the inspection was sunny with good visibility.

3.2 The trees

- 3.2.1 We surveyed 6 individual trees with stem diameters of 75 millimetres and above. The tree details have been entered into a tree schedule included at Appendix 1.
- 3.2.2 For ease of identification the trees are shown on the tree location drawing ref SPH/EP/5837-01/10.08 and have been allocated numbers. These numbers are cross-referenced within the BS 5837 survey schedule.
- 3.2.3 In making our assessment, consideration has been given to:
 - The health, vigour and condition of the trees.
 - Any structural defects and safe life expectancy.
 - The size and form of the trees.
 - The rare, unusual or component part of a formal feature.
 - Groups or individual trees that provide definite screening or softening effect.
 - Trees forming distinct landscape features.



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4. Constraints

4.1 Ecological constraints

- 4.1.1 The Conservation of Habitats and Species Regulations 2010 (as amended) and The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000 provides statutory protection to birds, bats, and other tree dwelling species. They could impose significant constraints on the use and timing of any tree matters considered in this report.

4.2 Root protection areas (RPAs)

- 4.2.1 Using BS 5837:2012 the RPAs have been calculated for the trees by reference to section 4.6.1 (a) and/or (b). The RPA is frequently described as a circle with a radius of prescribed distance within which no unspecified activity should occur and a high level of care is needed during any activities that are authorised within them, if they are to be successfully retained.
- 4.2.2 Specified intrusions into the RPAs can take place only where the ground is adequately protected in accordance with the requirements of section 6 (6.2.3.3) of the BS or as may be agreed with the Local Planning Authority (LPA). We have plotted the RPAs as dodecagons or polygons taking account of the site constraints on drawing SPH/EP/MIT-01/10.08.
- 4.2.3 The shape and position of the RPA may only be modified by an arboriculturist to meet the pre-existing site conditions or other factors that indicate that rooting has occurred asymmetrically. In all cases, we have considered the adjacent constraints including such things as the existing site access, buildings, hard standing and site topography.

4.3 Shade constraints

- 4.3.1 Large trees that cast dense shade may result in pressure to prune or remove them. Whilst either shade or sunlight might be desirable depending on the potential use; the design should avoid unreasonable obstruction of light. The shade constraints posed by the trees are plotted onto drawing ref SPH/EP/SH-01/10.08.

5. Tree protective measures

- 5.1 In terms of tree protection barriers the accompanying drawing reference SPH/EP/MIT-01/10.08, shows the RPA locations and specific tree protection required prior to and during the construction activities.
- 5.2 The tree protection barrier is designed to provide construction exclusion zones around the RPA of all trees to be retained.
- 5.3 The tree protection fencing should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees. The default specification for protective barriers is that specified in BS 5837:2012 Figure 2, section 6. A copy of Figure 2 is reproduced at Appendix 6. All weather signs must be attached by cable ties to each Heras panel as set out in Appendix 7.



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- 5.4 The recommended position of the tree protective fencing is shown on drawing SPH/EP/MIT-01/10.08.

6. Tree survey key

No:	Tree number on survey drawing		
Species:	Common/English and or Latin name		
Height:	Height in metres above ground level		
Number of stems:	Single stem, or number of stems if more than one		
Canopy spread:	In metres taken at the four cardinal points (N.E.S.W.)		
Diameter:	In millimetres measured in accordance with BS 5837 2012		
Height & direction of 1st branch:	In metres and by cardinal compass points. This can be found on the detailed tree assessment		
Age class:	Young Semi-mature Early-mature Mature Over-mature		
Root protection area:	In square metres and the nominal radius of a circle required to achieve this in metres		
Health - Physiological Condition (Phy Con):	Good Fair Poor Decline Dead		
Structural Condition: Crown, Stem, Basal Area:	Good Fair Poor Ivy		
Survey Comment:	i.e. Further investigation, aerial inspection, decay detection, wildlife study		
Estimated Remaining Contribution (ERC) in years:	i.e. less than 10, 10 to 20, 20 to 40, 40+		
Category Grading:	Code U	Trees unsuitable for retention	RED
	Code A	High quality category	GREEN
	Code B	Moderate category	BLUE
	Code C	Low category	GREY



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ARBORICULTURAL METHOD STATEMENT (AMS)

7. General

- 7.1 The key protection issues associated with this scheme in relation to existing trees, in the short, medium and long term, are the need for:
- Specification, supervision and auditing of tree works.
 - The protection of trees to be retained from physical damage to their above and below ground structures.
 - The protection of tree habitat.
 - The protection of the soil structure and prevention of damage to tree root systems by chemicals and other noxious substances/materials.
 - Monitoring, supervisions and liaison.

Tree Preservation Order Status

We have not made any investigation of the statutory protection status of the subject trees.

8. Introduction

- 8.1 Terms of reference:
We are to review the BS 5837:2012 tree survey reference data in order to integrate the proposed development options and safeguard the long term preservation of the retained trees. This AMS provides guidance on the typical range of processes that are involved during development and seeks to ensure that appropriate methods of implementation are carried out. It further aims to provide a holistic view of the development process and seeks to address any potential issues and conflicts that may arise and provide solutions to these, resolving them in line with current arboricultural and industry best practice guidance.
- 8.2 The AMS sets out the management and protection details in support of the planning proposal and they must be implemented to secure successful tree retention. This is based upon the assumption that the minimum general standards for development are those set out in BS 5837:2012 and the National Joint Utilities Group (NJUG) 2007 Volume 4, Issue 1: *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*. We have used our extensive experience to interpret these references in the context of evolving good practice and site specific issues relating to the development at Marsden.
- 8.3 The mitigation plan ref SPH/EP/MIT-01/10.08, included at Appendix 5, is illustrative and based entirely on information provided by Ordnance Survey and Day Tanner Ltd. The drawing can only be used for dealing with the tree issues and all scaled measurements must be checked against the original site drawings. The precise location of all protective measures must be confirmed at a pre-commencement meeting before any construction activity starts.



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8.4 Precautions when working in the RPA:

The following prohibitions apply within any tree RPA:

- No linear mechanical excavation whatsoever without prior written agreement from the LPA and Arboricultural Consultant (AC)
- No excavation by any other means without arboricultural site monitoring
- No hand digging without a written method statement from the main contractor having first been approved in writing by the AC
- No lowering of levels unless agreed in writing with the LPA and AC, except for the removal of grass sward using hand tools in accordance with BS 5837:2012 (section 7.4.2.1).
- No construction of a sealed hard surface
- No storage of plant or materials
- No storage or handling of any chemical including cement washings, unless site specific mitigation is approved by the AC and LPA
- No vehicular access without prior written agreement from the LPA
- No fire lighting.

8.5 In addition to the measures in 8.4, further precautions are necessary adjacent to trees:

A 10 metre separation distance shall be observed between any tree during the cement mixing phases including storage and other substances injurious to tree health, this should include such things as fuels, oil, bitumen, cement (including cement washings), builders' sand, concrete mixing and other chemicals.

8.6 Avoiding damage to stems and branches:

Care shall be taken when planning site operations in proximity to trees to ensure that contact with the retained trees and overhanging branches is avoided. Such contact can result in serious injury to the tree and might make the safe retention impossible. Consequently, any tree protection in proximity to the trees shall be constructed under the supervision of the AC, to ensure that adequate clearance from the trees is at all times maintained.

8.7 Access pruning:

Access pruning is not anticipated. Any changes that require pruning may only be conducted following consent and must be undertaken in accordance with BS 3998:2010 and current arboricultural practices. At no time must the trees be pruned by the construction contractors. All tree pruning must be undertaken by suitably qualified and insured arboricultural contractors under the guidance of the AC.



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9. Tree protection general

9.1 Default fencing (BS 5837:2012)

The proposed scheme involves construction activities in close proximity to retained trees, in particular trees (T) T1, T2, T4 and T5. It is considered that the minimum default type fencing must be that shown at Appendix 6, the location for this type of fencing is shown as a dashed red line on the RPA drawing ref SPH/EP/MIT-01/10.08, included at Appendix 5. In locations where construction work is adjacent or within an RPA the default fencing may be inappropriate, for example T1 and therefore an alternative specification to the default may be substituted providing it ensures an equal level of protection. Prior to the use of the alternate tree protection barrier the main contractor must provide a contingency plan and submit it to the AC, it should identify the reasons why the default cannot be used, the location and duration required for the substitute fence and it must be erected under the supervision of the AC. The AC must be given reasonable time to provide advice.

Specific tree protection measures have been considered at conflict points and mitigating measures are set out within this document.

9.2 Ground protection measures:

Ground protection is required to protect at least a functional minimum mass of undisturbed ground during the construction process and is required to limit compaction or contamination of the RPA. The specific ground protection measures must be installed and maintained during all the construction phases, unless work is directly supervised by the AC and agreed by the LPA. The proposed works on this site have been assessed and on the basis of the drawings supplied the following is required:

- The construction process requires working areas around the building and some of these areas impinge on individual trees, in particular the RPAs of T1 and T2, therefore temporary ground protection measures and tree protection fencing must be installed to protect the trees and surrounding ground. Ground protection measures are set out at Appendix 8 and are considered appropriate to this development.

10. Site specific precautions and mitigation

10.1 Tree loss.

No trees are to be removed for this scheme.

Mitigation: None required.

10.2 Access Pruning.

No tree pruning is required as there is adequate canopy clearance on T1, the closest tree to the proposal, and there is no requirement to prune the remaining trees.

Mitigation: None required.



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10.3 Excavation for services, and rain water soakaways.

We have not been provided with any details of additional rain water drainage or soakaways and it is assumed that they will be connected to the existing, however should there be any change to this the following mitigation applies.

Mitigation:

- The tree protection barrier for T2 to T5 inclusive must not be moved without prior consent. We consider the tree protection, as shown on drawing SPH/EP/MIT-01/10.08, included at Appendix 5, will provide appropriate protection during any such ground works. Any changes to this specification must be agreed in writing by the LPA and AC before the changes are made.
- Any excavations within the RPAs of T1 to T5 must be undertaken by hand.
- If roots less than 25 millimetres in diameter are encountered during excavation they must be cut cleanly with a sharp hand saw and covered with damp hessian to prevent them from drying out. Roots greater than 25 millimetres in diameter must remain in place and the AC contacted for advice before work any pruning commences.
- Spoil and building materials must not be stored in the RPA of trees.
- All new services required for project must be considered against the minimum standards required will be those as set out in the National Joint Utilities Group (NJUG) 2007 Volume 4, Issue 1: *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*. Whilst NJUG 2007, Volume 4 is not considered applicable to most development sites however in the absence of an alternative standard it must be used as the starting point and any deviation from it agreed in writing with the AC before work commences.

10.4 Excavations for the construction of the proposed building.

From the detail provided, we understand that the building extension will be constructed over the original footprint with the bulk of the new building to the rear (towards T5). From our site inspection the RPA of T2 is just outside the footprint and therefore no special measures are required. However working space required for the building is within the RPA of T2 and the unprotected RPA must be protected as set out below.

Mitigation:

- The tree protection barrier and ground protection area shown on drawing SPH/EP/MIT-01/10.08 must remain in situ until all construction activity is completed. This should include any landscape operations. Any changes to this specification must be agreed in writing by the LPA and AC before the changes are made.
- The construction process may require working space within the RPA of T1 and is required in the RPA of tree T2 therefore, temporary ground protection must be installed to protect the surrounding ground. Ground protection measures are set out at Appendix 8 and are considered appropriate to this development.
- Any excavations within the RPA of T1 and T2 must be undertaken by hand.
- Spoil and building materials must not be stored within the RPAs of retained trees.



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- 10.5 Spoil movements, storage of materials, skips, parking and welfare facilities.

Mitigation: No specific mitigation is required as there is adequate space for site storage, parking, skips and welfare facilities on site.

11. Arboricultural supervision

- 11.1 Site supervision during work within or close to the RPA must be undertaken at regular intervals and a written record of the meetings maintained. The meetings must include a site set up visit and thereafter at intervals not exceeding every 60 working days until completion. The main tree most likely to be affected is set out below.

- For the main construction phases around trees T1 and T2 arboricultural supervision must be provided to ensure that the RPAs are not compromised.

- 11.2 The AC must attend all meetings associated with implementing the development and monitor the tree protection fencing and ground protection to ensure they remain intact and effective. A written report of all meetings and monitoring visits must be maintained. Upon completion a copy of the site monitoring notes must be forwarded to the LPA.

12. Contingency plans

- 12.1 A general contingency plan for this project should be prepared by the main contractor for controlling such things as chemical/fuel spillage, run off from cement washings, sewage or water leaks, site collisions and emergency access into or adjacent to tree RPA.

13. Queries

Any queries regarding this tree survey and AMS should be addressed, in the first instance, to Urban Tree Experts:

Urban Tree Experts
Unit H, Bridge Farm
Reading Road
Arborfield
Berkshire RG2 9HT

Telephone: 0118 9762 902
Mobile: 07786 162202
Email: simonh@tree-surveys.com

Simon Holmes MSc
Chartered Arboriculturist
Urban Tree Experts

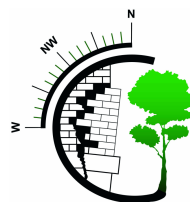


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APPENDIX 1

BS5837:2012 Tree Survey



Client: Mr J Cunningham
 Project: Marsden
 Survey Date: 10/08/2017
 Surveyor: Steve Noble

Tree Surveys

Unit H Bridge Farm
 Reading Road
 Arborfield
 Berkshire
 RG2 9HT
 Phone: 0118 976 2902

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
1														
Common Laburnum <i>Laburnum anagyroides</i>		6.5	8	311 (Eq)	N	3	2	M	A: 43.8 R: 3.73	Good	C: Good S: Poor B: Poor	Multi stemmed from ground level with touching main stems		C.2 10 to 20 yrs
2														
Leyland Cypress <i>X Cupressocyparis leylandii</i>		15	2	434 (Eq)	N	3	1.5	M	A: 85.2 R: 5.2	Good	C: Fair S: Fair B: Fair	Twin stemmed from ground level		B.2 n/a
3														
Deodar Cedar <i>Cedrus deodara</i>		17.5	1	730	N	6	2	M	A: 241.1 R: 8.76	Good	C: Fair S: Good B: Good	Suppressed crown on west side		B.2 >40 yrs
4														
Deodar Cedar <i>Cedrus deodara</i>		17.5	1	870	N	7	1.5	M	A: 342.5 R: 10.44	Good	C: Fair S: Good B: Good	Suppressed crown on east side		B.2 >40 yrs
Age Classifications:		N	Newly planted	EM	Early Mature		Condition:		C	Crown	Stems:		Ø	Diameter
		Y	Young	M	Mature				S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
		SM	Semi-mature	OM	Over Mature				B	Basal area				

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
5												
Serbian Spruce <i>Picea omorika</i>	13	1	310	N	2	2	M	A: 43.5 R: 3.72	Good	C: Poor S: Poor B: Good	Fell :: Fell and remove stump(s) ----- Poor form with failed leading main stem	C.2 10 to 20 yrs
6												
Lawson Cypress <i>Chamaecyparis lawsoniana</i>	7	1	150	N	1	2	M	A: 10.2 R: 1.8	Fair	C: Poor S: Poor B: Fair	----- Tree outside boundary fence line	C.2 10 to 20 yrs
Age Classifications: N Newly planted EM Early Mature Condition: C Crown Stems: Ø Diameter Y Young M Mature S Stem (Eq) Equivalent stem diameter using BS5837:2012 definition SM Semi-mature OM Over Mature B Basal area												

Report selection criteria.

Projects.

Marsden

Date Range.

Any Date

Work types.

----> Fell :: Fell and remove stump(s)

----> -No Selection made-

Latest Survey.

All surveys for the selected trees.

---> Last survey for each selected tree.

Work Completed.

---> Work Completed

---> Work Not Completed

Number of trees in selected Project(s)6

Number of trees in Report selection6

Age Classifications:	N	Newly planted	EM	Early Mature	Condition:	C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature		S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature		B	Basal area			



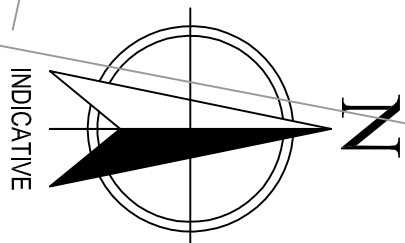
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APPENDIX 2

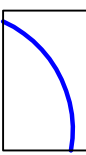
NOTES

- All dimensions must be checked on site and not scaled from this drawing.
- The original of this drawing was produced in colour, a monochrome copy should not be relied upon.
- Read drawings in conjunction with arboricultural report.
- Based on OS data. Licence number 100022432

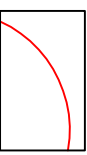


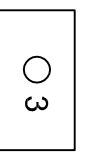
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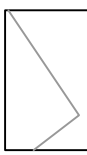
- 

Tree Category A 1,2 or 3
- trees of high quality
- 

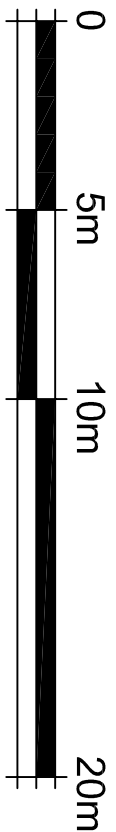
Tree Category B 1,2 or 3
- trees of moderate quality
- 

Tree Category C 1,2 or 3
- trees of low quality
- 

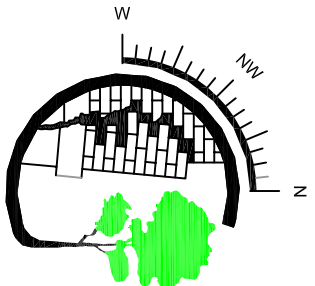
Tree Category U
- trees that cannot realistically be retained
- 

Tree number
- refer to report for information
- 

Existing site features



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Unit H, Bridge Farm
Reading Road, Arborfield
Berkshire RG2 9HT
Tel: 0118 762902
Fax: 0118 9761168
e-mail: info@tree-surveys.com

Client

Mr J Cunnigham

Job Title

Marsden

Drawing Title

TREE LOCATION PLAN

Scale 1:200 @ A1

Date	August 2017	Drawn: MJL	Checked: SPH
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Dwg. No.	SPH/EP/68374/01/10.08	Rev.
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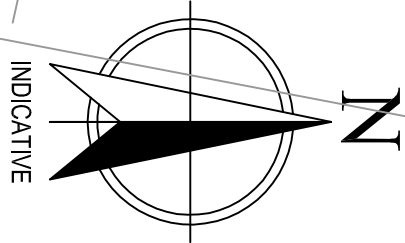
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APPENDIX 3

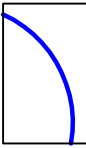
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- Read drawings in conjunction with arboricultural report.
- Based on OS data. Licence number 100022432

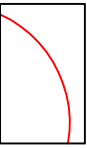


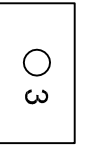
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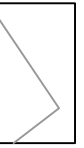
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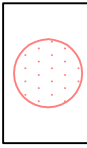
Tree Category A 1,2 or 3
- trees of high quality
- 

Tree Category B 1,2 or 3
- trees of moderate quality
- 

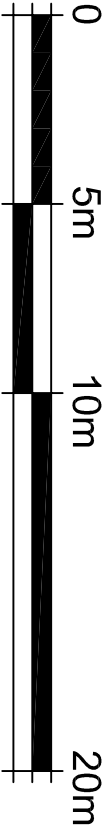
Tree Category C 1,2 or 3
- trees of low quality
- 

Tree Category U
- trees that cannot realistically be retained
- 

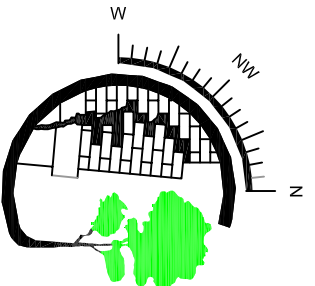
Tree number
- refer to report for information
- 

Existing site features
- 

Root protection area (RPA)



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Job Title

Marsden

Drawing Title

ROOT PROTECTION AREA PLAN

Scale 1:200 @ A1

Date	August 2017	Drawn: MJL	Checked: SPH
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Dwg. No.	SPH/EP/RPA-01/10.08	Rev.
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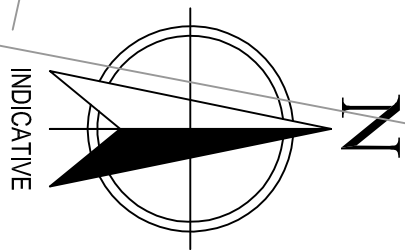
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APPENDIX 4

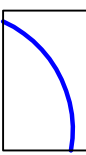
NOTES

- All dimensions must be checked on site and not scaled from this drawing.
- The original of this drawing was produced in colour, a monochrome copy should not be relied upon.
- Read drawings in conjunction with arboricultural report.
- Based on OS data. Licence number 100022432

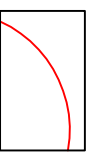


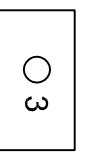
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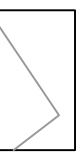
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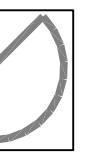
Tree Category A 1,2 or 3
- trees of high quality
- 

Tree Category B 1,2 or 3
- trees of moderate quality
- 

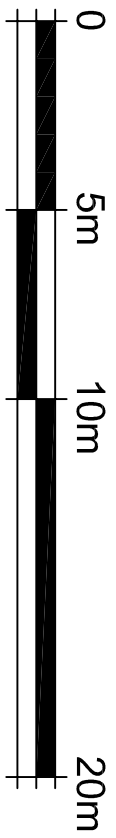
Tree Category C 1,2 or 3
- trees of low quality
- 

Tree Category U
- trees that cannot realistically be retained
- 

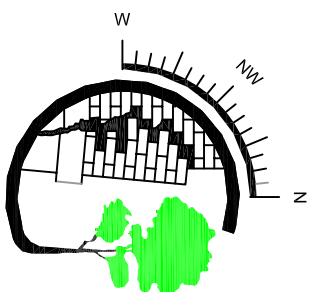
Tree number
- refer to report for information
- 

Existing site features
- 

Area of shade



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SHADE CONSTRAINTS PLAN

Scale 1:200 @ A1

Date	August 2017	Drawn: MJL	Checked: SPH
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Dwg No.	SPH/EP/SC-01/10.08
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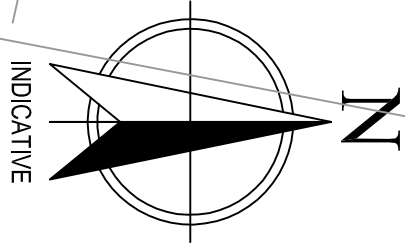
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APPENDIX 5

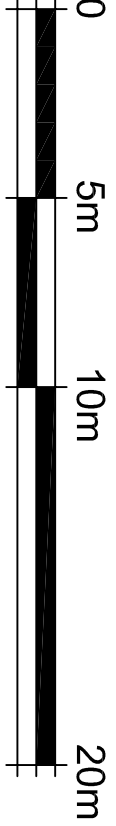
NOTES

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- Based on OS data. Licence number 100022432

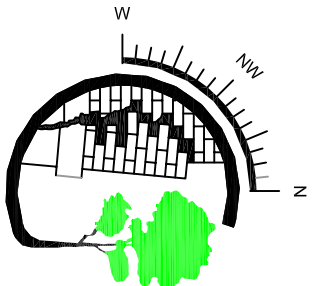


Key:

- Trees retained
- refer to report for information
- Tree number
- refer to report for information
- Existing site features
- Root protection area (RPA)
- Proposed area of works
- Ground protection,
- refer to arboricultural method statement
- Tree Removed
- Tree protection barrier (indicative)
- refer to report for information



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MITIGATION PLAN

Scale 1:200 @ A1

Date August 2017 Drawn: MJL Checked: SPH

Dwg No. SPH/EP/MIT-01/10.08

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APPENDIX 6



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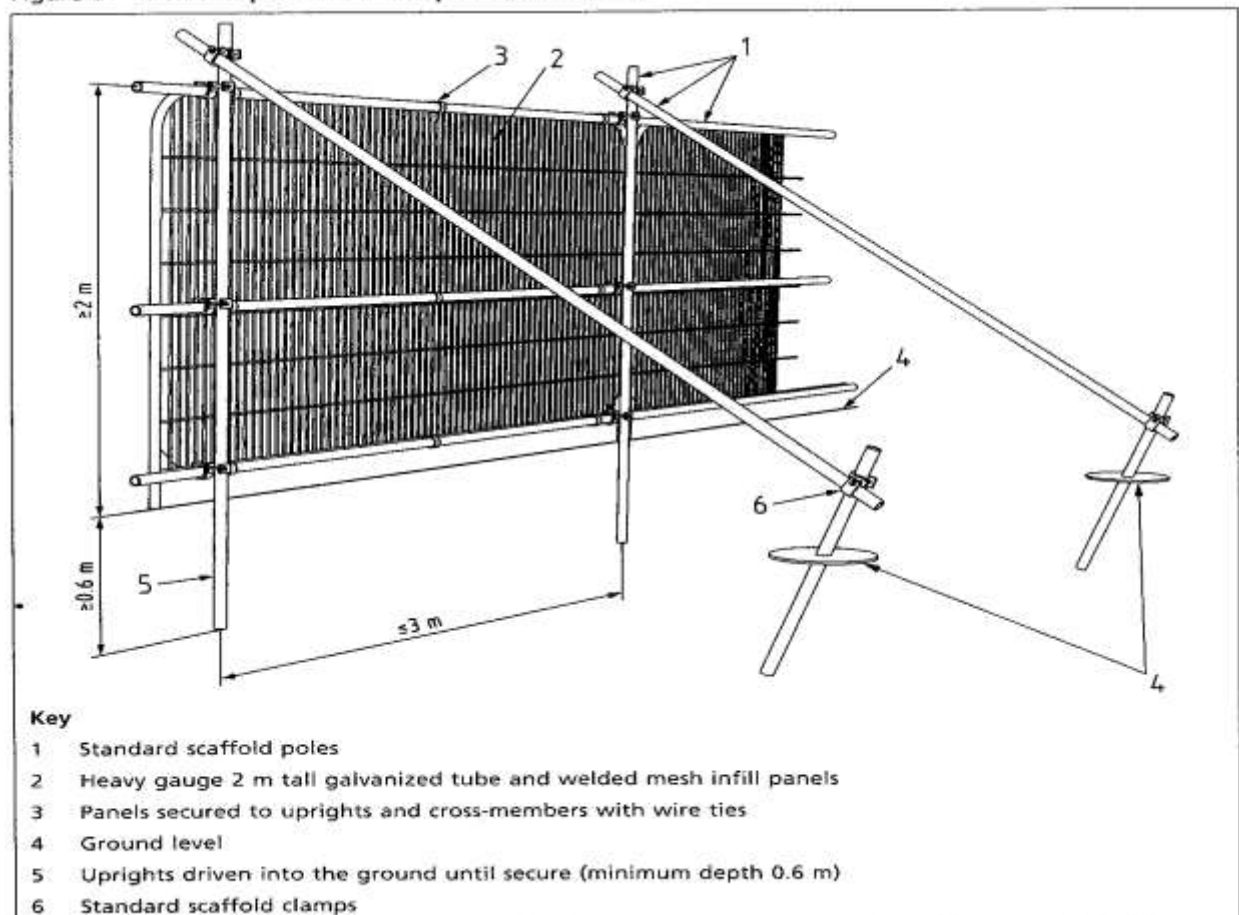
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BS 5837 FIGURE 2 TREE PROTECTION

Root Protection Areas (RPAs), enclosed by Default Temporary Protective Fencing, as detailed below and to be agreed with the Local Planning Authority (LPA), shall:

1. Be protected throughout the development process, as specified and detailed in BS 5837:2012 Section 6.2, Fig 2
2. Be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project.
3. Preclude any delivery of site accommodation and or materials and or plant machinery.
4. Preclude all construction related activity, with the sole exception of specified arboricultural works and any other works carried out under supervision that has been agreed by all parties, and:
5. Preclude the storage of all development related materials and substances including fuel, oils, additives, cement and or any other deleterious substances.
6. Any incursions into RPAs must be by prior arrangement, following consultation with the LPA.

Figure 2 Default specification for protective barrier





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APPENDIX 7

TREE PROTECTION ZONE
KEEP OUT!

NO DIGGING OR TRENCHING
NO STORAGE OF PLANT OR MATERIALS
NO VEHICLE ACCESS
NO FIRE LIGHTING
NO CHEMICAL HANDLING
AVOID PLANT CONTACT WITH TREE CANOPY
REPORT ANY DAMAGE
TO TREES OR FENCING IMMEDIATELY



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APPENDIX 8



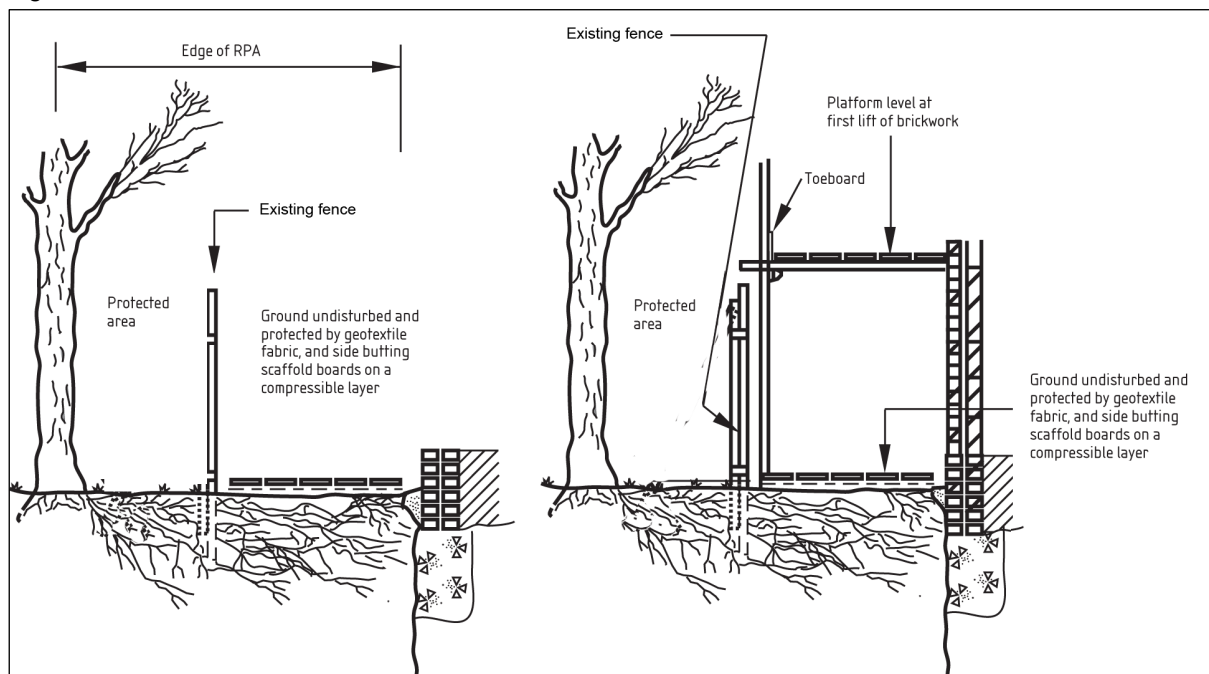
APPENDIX 6

GROUND PROTECTION

Temporary Ground Protection

Any temporary ground protection that may be required within an RPA shall conform to section 6.2.3. of BS 5837:2012, an example is shown in Figure 1 below.

Figure 1.



Option 1 – No vehicle access required.

1. Prior to installing ground protection the area beneath it must be lined with heavy duty polythene (1000/250 microns) to prevent contamination of the soil within the protected RPA.
2. Side butting scaffold boards shall be fitted to ensure adequate cover of the area to be protected.
3. Prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials the Arboricultural Consultant shall inspect the temporary ground protection.
4. The temporary ground protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

Option 2 - Vehicle access required

In place of the above items 1, 2 and 3 the use of a temporary metal track, such as DuraDeck® ground protection mats, MegaDeck™ or Rig Mats, they should be laid on a 150mm deep layer of woodchip or sharp sand to minimise compaction and prevent damage to surface roots.